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09/604,595

REMARKS

STATUS SUMMARY

In the pending Office action, claims 21, 22, 25, and 26 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,130,906 to *Davidovici et al.* ("*Davidovici*"), and claims 33 and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Davidovici*. Claims 1, 6, 16, 18, and 20 are allowed.

These formal matters identified in the Office Action are addressed herein below.

AMENDED CLAIMS

Applicants have amended all pending claims, claims 1, 3, 6, 8, 10, 16, 18, 20-22, 25, 26, 33, and 34, to improve the grammar and readability of these claims and correct other minor errors. For example, "the" was changed to "a" in claims 3, 10, 18, 20, 22, and 26 to describe the proper antecedent basis. Additionally, the phrase "one of the plurality of" was changed in several claims to "a first signal sample" or "a first PN code chip," as appropriate, to be consistent with other references to second, third, and fourth signal samples or PN code chips. Other minor grammatical changes were made.

No new matter has been added by these Amendments.

CLAIM REJECTIONS - 35 U.S.C. § 102(e)

Claims 21, 22, 25, and 26 are rejected under 35 U.S.C. § 102(e) as being anticipated by *Davidovici*. Applicants respectfully traverse this rejection for the reasons set forth below.

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Independent claim 21 claims two switches for selecting either the in-phase or quadrature-phase portion and the odd or even sample of a signal sample pair, while claim 25 claims a method comprising steps that select the same elements, *i.e.*, the in-phase or quadrature-phase portion and the odd or even sample of a signal sample pair. In this regard, claims 21 and 25 are similar to allowed claims 1, 6, and 16 in that the second switch is coupled to the first switch and selects an even or odd sample of the selected in-phase or quadrature-phase portion. By selecting the in-phase or quadrature-phase portion of the spread spectrum signal and the odd or even signal sample prior to reaching a multiplier, the register and summing circuitry of a matched filter is reduced by half. *See specification*, page 18, lines 17-21.

The Examiner claims that *Davidovici* discloses a system for despreding a spread spectrum signal using a PN code represented by replica code chips that comprises "a first switch (block 51) for selecting one of the in-phase portion and the quadrature-phase portion" and "a second switch (blocks 123 and 323) coupled to the first switch for selecting one of the even sample and the odd sample."

In general, *Davidovici* is related to a parallel-code-matched filter, which is an apparatus configured to process a plurality of spread spectrum signals that arrive simultaneously in parallel at a spread spectrum receiver (col. 2: lines 52-60). Block 51 of FIG. 1 is an in-phase/quadrature-phase multiplexer that selects one of the second in-phase multiplexer 126 and the second quadrature-phase multiplexer 323, for alternating between processing of in-phase and quadrature-phase components (col. 6: lines 21-24). Block 123 is a first in-phase multiplexer that selects between the first in-phase symbol

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register 122 and the second in-phase symbol register 222 and block 323 is a first quadrature-phase multiplexer that selects between the first quadrature-phase symbol register 322 and the second quadrature-phase symbol register 422 (col. 5: lines 18-22 and 32-35).

Davidovici also discloses a method using a parallel-code-matched filter that detects during a symbol-time duration a combined multiplicity of symbols from a plurality of linearly-combined, spread spectrum signals arriving in parallel at the parallel-code-matched filter (col. 6: lines 52-63). The method comprises the step of demultiplexing, sequentially, a sequence of the combined multiplicity of symbols, occurring during a symbol-time duration, and storing sequentially a combined multiplicity of chip-sequence signals corresponding to the combined multiplicity of symbols (col. 6: lines 21-24). The combined multiplicity of chip-sequence signals is then compared with each of a plurality of replicas of the chip-sequence signals as sequentially selected (col. 6: line 64 through col. 7: line 3).

In other words, the parallel-code-matched filter of *Davidovici* selects and processes all symbols of a plurality of spread spectrum signals, including the in-phase and quadrature-phase components, using demultiplexers to demultiplex "a sequence of the combined multiplicity of symbols [from a plurality of spread spectrum signals] into a plurality of symbol registers" (*abstract*). Thus, blocks 123 and 323 of FIG. 1 of *Davidovici* are not each a "second switch" as disclosed in claims 21 and 25 because they are not coupled to the "first switch" (block 51) and also because they perform their multiplexing operations on signals prior to the first switch, block 51.

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As for the "first multiplier coupled to the second switch" of claim 21, the Examiner refers to XOR bank 41 that is "coupled to the in-phase/quadrature-phase (I-Q) multiplexer 51 and to the reference multiplexer 32" (col. 6: lines 34-37). Thus, XOR bank 41 is coupled to the first switch and not the second switch as set forth in claim 21. The same applies to claim 25 in that the third step of this method claim is the combining of "the selected portion of the selected sample" with "a first PN code chip."

Additionally, with respect to claim 22, The Examiner also characterizes XOR bank 41 as a "second multiplier," which is not permissible because XOR bank 41 cannot be both a first multiplier and a second multiplier for purposes of § 102 anticipation.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987), MPEP § 2131. "We thus hold that unless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102." *Net MoneyIN v. VeriSign, Inc.*, No. 2007-1565, pages 17-18 (Fed. Cir. October 20, 2008).

Here, Applicants respectfully submit that the reference *Davidovici* does not disclose all of the claimed limitations arranged or combined in the same way as recited in the claim, specifically, a first switch for selecting one of an in-phase portion and a quadrature-phase portion of a first signal sample pair, a second switch coupled to the first

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switch for selecting one of an even sample and an odd sample, and a first multiplier coupled to the second switch for multiplying the selected portion of the selected sample of the first signal sample pair with a first PN code chip. In view of the foregoing, Applicants respectfully submit that independent claims 21 and 25 are patentable under 35 U.S.C. § 102(e) over *Davidovici*, as well as claims 22 and 26 that respectively depend directly from said independent claims 21 and 25. Therefore, Applicants respectfully request that the rejections under 35 U.S.C. § 102(e) be withdrawn.

RESPONSE TO CLAIM REJECTIONS UNDER 35 U.S.C. § 103(a)

Claims 33 and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Davidovici* because *Davidovici* discloses all of the limitations of claims 33 and 34 excepting the limitation of the system implemented as computer-readable media. Because the Examiner relies on the same arguments as to claims 21 and 22, Applicants repeat their arguments that *Davidovici* does not disclose all of the claimed limitations arranged or combined in the same way as recited in claims 33 and 34 and therefore respectfully request that the rejections under 35 U.S.C. § 103(a) be withdrawn.

Accordingly, Applicants believe that independent claims 33 and 34 are in condition for allowance and Applicants respectfully request that the Examiner withdraw the rejections of claims 33 and 34 under 35 U.S.C. § 103(a).

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ALLOWABLE SUBJECT MATTER

Applicants acknowledge that claims 1, 6, 16, 18, and 20 are in condition for allowance and thank the Examiner for such findings. Applicants submit that claim 3, which depends from claim 1, and claims 8 and 10, which depend from claim 6, are also in condition for allowance.

CO-PENDING RELATED APPLICATIONS

Applicants hereby advise the Examiner of certain co-pending related applications and recent Office actions and other proceedings therein.

I. Patent Application No. 09/498,893 filed February 7, 2000, entitled "Doppler Corrected Spread Spectrum Matched Filter," by Stephen Gronemeyer (hereinafter the '893 Application). This pending application, Patent Application No. 09/604,595, is a continuation-in-part of said '893 Application. A Final Rejection was filed July 9, 2008 rejecting claims 1, 2, 5, 8, 9, 11, 12, 14, 15, 20, 22, 23, 26, and 29 of the application under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,130,906 to *Krasner* ("*Krasner*") in view of U.S. Patent No. 6,005,903 to *Mendelovicz* ("*Mendelovicz*"); claims 6, 12, and 27 of the application under 35 U.S.C. § 103(a) as being unpatentable over *Krasner* in view of *Mendelovicz*, and further in view of U.S. Patent No. 6,130,906 to *Furukawa et al.* ("*Furukawa*"); claims 7 and 28 of the application under 35 U.S.C. § 103(a) as being unpatentable over *Krasner* in view of *Mendelovicz*, and further in view of U.S. Patent No. 6,714,983 to *Koenck et al.* ("*Koenck*"); claim 21 under 35 U.S.C. § 103(a) as being unpatentable over *Krasner* in

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view of *Mendelovicz*, and further in view of U.S. Patent No. 4,485,477 to *Nossen* ("*Nossen*"); claims 17-19, 93, 40, and 44 of the application under 35 U.S.C. § 103(a) as being unpatentable over *Krasner* in view of *Mendelovicz*, and further in view of U.S. Patent No. 6,005,885 to *Warren et al.* ("*Warren*"); claim 41 of the application under 35 U.S.C. § 103(a) as being unpatentable over *Krasner* in view of *Mendelovicz*, and further in view of *Warren* and *Koenck*; and claim 41 of the application under 35 U.S.C. § 103(a) as being unpatentable over *Krasner* in view of *Mendelovicz*, and further in view of *Warren* and *Furukawa*. An Advisory Action was mailed October 6, 2008 rejecting certain arguments and declining to enter proposed amendments filed after a final rejection. On November 10, 2008, an Amendment/Reply and a Request for Continued Examination were filed.

II. Patent Application No. 10/870,673 filed June 16, 2004, entitled "System and Method for Despreading in a Spread Spectrum Matched Filter," by Paul A. Underbrink et al. (hereinafter the '673 Application). This application is a divisional of this pending application, Patent Application No. 09/604,595. A Non-Final Rejection was filed June 6, 2008 rejecting claims 5-7, 12, and 13 under 35 U.S.C. § 101 and provisionally rejecting claims 1, 2, 4, and 14 on grounds of nonstatutory obviousness-type double patenting as being unpatentable over the claims 1, 9, 22, and 39 of co-pending Patent Application No. 09/483,893 filed February 2, 2000, entitled "Doppler Corrected Spread Spectrum Matched Filter," by Steven A. Gronemeyer.

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CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

Respectfully submitted,
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